

## **MINUTES**

### **CALIFORNIA TRAFFIC CONTROL DEVICES COMMITTEE MEETING OF November 5, 1997**

The last meeting of the CTCDC in 1997 was held in the District 12 Auditorium of Caltrans, in Santa Ana on November 5, 1997.

Chairman Wayne Tanda opened the meeting at 9:00 a.m. with the introduction of members and guests. The Chairman thanked Caltrans for their gracious hospitality on behalf of the Committee.

The following members, alternates, and guests were in attendance:

<b>ATTENDEES</b>	<b>ORGANIZATION</b>	<b>TELEPHONE</b>
Members (Voting)		
Wayne Tanda Chairman	League of California Cities, City of San Jose	(408) 277-4945
Merry Banks Vice Chairman	California State Automobile Association, San Francisco	(415) 565-2297
Bruce Carter	California State Association of Counties, Shasta County	(530) 225-5661
Capt. Ron Newton	California Highway Patrol, Sacramento	(916) 657-7222
Dick Folkers	League of California Cities, City of Palm Desert	(760) 346-0611
Jerry Meis	California Department of Transportation, Sacramento	(916) 654-4551
Richard Backus	Auto Club of Southern California	(714) 885-2326
John Wallo	California State Association of Counties, San Luis Obispo County	(805) 781-4466
Jack Kletzman Secretary	California Department of Transportation, Sacramento	(916) 654-4715

**CTCDC MINUTES**  
**November 5, 1997**

<b>ATTENDEES</b>	<b>ORGANIZATION</b>	<b>TELEPHONE</b>
Antonio Aquino	City of Garden Grove	(714) 741-5193
Bob Brow	Sacramento County	(916) 875-5327
Dennis Dunn	County of Sacramento	(916) 875-5857
Mark Esposito	Hartzog and Crabill	(714) 731-9455
Skip Farnsworth	Caltrans	(714) 974-3091
John Fisher	City of Los Angeles DOT	(213) 580-1193
Gary Foxen	Auto Club of Southern California	(714) 637-0412
Steve Hancock	Caltrans, Sacramento	(916) 654-5035
Gary Kevorkian	Caltrans, District 7	(213) 897-4689
Dwight Ku	California State Automobile Association, Sacramento	(916) 443-2577
Conrad Lapinski	City of Mission Viejo	(714) 470-3039
Mark Lewin	City of Fountain Valley	(714) 593-4435
Mili Lim	Caltrans, District 12	(714) 724-2167
Lujana Lopez	CHP	(916) 657-7222
Perry Lowden	Consultant	(530) 673-2214
Hank Mohle	City of Murrieta	(909) 698-1040 x242
Viner Nguyer	City of Santa Ana	(714) 647-5612
Ismile Norbaksh	City of La Palma	(714) 731-9455 x102
Dave Royer	Consulting Traffic Engineer	(805) 255-6556
Jeff Sinn	City of Fountain Valley	(714) 593-4433
Gerald Tripp	Caltrans, District 6	(209) 488-4174
Robert Zeigler	Marin County	(415) 499-6336

**CTCDC MINUTES**  
**November 5, 1997**

**MINUTES**

MOTION: By Dick Folkers, second by Bruce Carter, to adopt the minutes of the Walnut Creek meeting, held on July 17, 1997. Motion carried 8-0.

**ELECTIONS**

MOTION: By Dick Folkers, second by Merry Banks, to elect Ray Mellen Chairman and John Wallo Vice-Chairman. Motion carried 8-0.

**MEMBERSHIP**

A special plaque and a standing ovation were given to Gary Foxen in recognition of his long and valued service to the Committee.

**91-6 EMERGENCY MEDICAL CARE**

Bruce Carter said he had brought this item to the Committee because he is reluctant to spend county funds for signs on State highways. The policy of the EMERGENCY MEDICAL CARE (G66-14) symbol sign states that "... signing on State Highways is normally provided by local agencies under encroachment permit." A local agency requested such a sign from Caltrans, who referred that agency to Shasta County. Carter sought to receive input from other local agencies on this issue, but received only one response.

John Wallo feels there is inconsistency in Caltrans installation policy with both this sign and parking signs. He said that sometimes Caltrans takes the initiative and other times Caltrans refers people to the local agency.

Wayne Tanda established that in addition to the G66-14, there is a golf symbol sign G200-80 which requires installation and maintenance by the local agency, under permit. Bruce Carter recalled that State had no interest in the G66-14 sign, but approved the sign for use by local agencies. Carter questions the legality of spending county money on a State facility.

**CTCDC MINUTES**  
**November 5, 1997**

**91-6 EMERGENCY MEDICAL CARE** (continued.)

Gerry Meis pointed out that there is precedence for other agencies paying for signs on the State highway system. He cited the South Coast Air Quality Management District erecting ELECTRIC VEHICLE CHARGING STATIONS, under permit, on the State highway system. He doubts that a local agency would get challenged for putting up signs on State highways.

Wayne Tanda noted that the City of San Jose determines what the appropriate parking regulations should be and installs the parking signs on State highways. That authority has been delegated to the City under a co-operative agreement and is consistent with provisions in the Vehicle Code and Traffic Manual. Bruce Carter said Shasta County passes an ordinance and sends it to Caltrans for approval before they can install the sign.

Jack Kletzman said that Caltrans policy is flexible rather than inconsistent. There are areas where Caltrans installs signs and there are other areas where the local agencies install signs under a co-operative agreement, permit, or other documentation. This flexibility allows Caltrans and local agencies to enter into a variety of agreements which may be more appropriate than having a "one size fits all" policy.

Gerry Meis said that as a general rule, Caltrans installs signs on State highways. There are internal problems in getting signs installed by Maintenance, because their work load is greater than their available resources. Jack Kletzman said that in many cases Caltrans is not in a position to make signing decisions for local agencies. The need for signing to an emergency medical care facility, the adequacy of the facility, and the continued existence of the facility are best decided at the local level. Meis said that Caltrans does require an official request from the local agency for sign installation.

Jack Kletzman explained that in some instances Caltrans might put in parking restriction signs specifically for safety purposes. At other times, local businesses request parking restrictions, and that is best decided by local agencies. Bruce Carter took exception to this, noting that if local agencies are not allowed to dictate different speed limit signs, why should they be responsible for parking signs. Kletzman responded that one was a safety issue and the other was a regulatory issue.

**CTCDC MINUTES**  
**November 5, 1997**

**91-6 EMERGENCY MEDICAL CARE** (continued.)

Dick Folkers said that from a city's standpoint there is a need for flexibility, particularly in the larger cities. In rural areas it may be a difficult situation. In an urban area, if the business community wants restricted parking along a State route, and it is consistent with other traffic needs, the local agency needs to address these concerns. Folkers said there is a real dichotomy in that there are situations concerning safety and situations which are economically motivated and the Caltrans flexible policy allows local agencies to react to both. If the EMERGENCY MEDICAL CARE sign is really necessary, the political forces in that locality will see that it is erected. A questionable sign would not be erected. Gerry Meis offered to work with any local agency having difficulty putting up this sign.

John Wallo suggested that sign policies should spell out who is responsible for the sign. Wallo said that Caltrans' District 5 told him the only time Caltrans deals with a parking sign is when it is a 24 hour restriction anything less than that was up to the local jurisdiction. Six months later, an organization having a hall adjacent to the State highway thought that off street parking was dangerous, and Caltrans said that was up to local agencies. The County got the permit and erected the sign. Wallo feels this is inconsistent and that local agencies should know what Caltrans policies are and they should be on a Statewide basis. He feels that the County should not have to take its limited signing money and benefit the State highway.

Perry Lowden told the Committee there were only two signs which required local agencies to erect them as a matter of policy, the golf [1992] and the emergency medical [1991] symbol signs. At the time the signs were approved, Caltrans was told not to put up any golf signs. The whole issue of service signs has changed since then. Lowden said the EMERGENCY MEDICAL CARE sign was developed, at the request of local agencies, with the understanding, that people wanting the sign would pay for it. The primary use was for private clinics which did not qualify as hospitals. The local agency would install it under permit. The same thing was true of the golf symbol sign.

**CTCDC MINUTES**  
**November 5, 1997**

**91-6 EMERGENCY MEDICAL CARE** (continued.)

Bruce Carter responded that this might be one of the inconsistencies because Caltrans' District 2 will issue Shasta County the permit so that the County maintains the sign. Carter believes that Caltrans doesn't feel the local emergency group will maintain the sign and uses the permit process to tie the county to the maintenance. Perry Lowden responded if the sign is not maintained, there is no sign. Lowden reiterated the fact that it isn't supposed to be either county or State money and that the signs were developed when policies for service signs were a lot tighter.

Wayne Tanda summarized that the provisions for the G66-14 and G200-80 symbol signs had, at their inception, a policy that the sign would be installed under permit by local agencies and that this provision may no longer be appropriate. Tanda suggested the deletion of that provision so that it is treated like every other sign. Gerry Meis contended that the policy was not necessarily inappropriate but that Caltrans was willing to review the policy. However if the symbol sign is for a specific private facility, it is unlikely that Caltrans will change the policy. Tanda asked if not changing the policy meant that Caltrans would delete the sign or continue to allow local agencies to use the sign under permit. Meis responded that Caltrans would issue the permit for the local jurisdiction to post the sign and it was up to the local agency how to finance it.

Dick Folkers established that the blue and white generic services signs were paid for by Caltrans. Wayne Tanda established that if the motion passed and Caltrans agreed to the recommendation, it would mean that installation of these two signs would be at Caltrans discretion, and the local agencies would have no recourse.

MOTION: By Bruce Carter, second by Dick Folkers, to delete the phrase, "Signing on State highways is normally provided by local agencies under encroachment permit." for the G66-14 and G200-80 signs. Motion failed 3-4 with one abstention.

ACTION: Item completed.

**CTCDC MINUTES**  
**November 5, 1997**

**Item 92-4C LED STUDY, OTHER LOCAL AGENCIES**

Gerry Meis announced that a letter was about to be sent, advising local jurisdictions that a red LED specification had been adopted by Caltrans and that there was no need for further experimentation. Jack Kletzman said that this draft had been approved by Caltrans Office of Electrical Systems, the Caltrans Policy Committee, and the CTCDC chairman.

Gerry Meis read, "I am sure, by now, you are aware that Caltrans has approved a specification for red LEDs in signal modules. The existence of the State specification ends the need for further experimentation to develop minimum standards. This letter is to advise you that existing test LEDs should be removed and replaced with standard signal light sources, which now include LEDs, as soon as practical. Enclosed for your use are the State specifications and a copy of the recently revised Guidelines for Experimentation." Wayne Tanda noted that this letter addressed the discussion at the last meeting of how agencies who have a significant investment in LEDs can phase them out. Tanda feels the terminology "as soon as practical" meets the request of the Committee and the practical realities of the situation.

In response to questions from the audience, Steve Hancock told the Committee that Caltrans has three LED manufacturers under test. One looks good and is expected to pass in a few weeks. Caltrans will issue an evaluation test report to the manufacturers for certification. If an agency has questions concerning successful manufacturers, Hancock can be reached at (916) 654-5039. He said that Caltrans Maintenance is expected to issue a report outlining a program for retrofitting State signals in the near future. The LED specification is on the Caltrans [[www.dot.ca.gov/hq/traffops/electsys/led/index.htm](http://www.dot.ca.gov/hq/traffops/electsys/led/index.htm)] Internet. Steve Hancock said that Caltrans Maintenance expected to purchase LEDs within the next few months but he did not know if local agencies could piggy-back on the purchase contract. Hancock said the Maintenance LED contact was Gonzalo Gomez and his phone number is (916) 654-2461

MOTION: By Dick Folkers, second by Bruce Carter, to endorse the draft letter.  
Motion passed 8-0.

ACTION: Item completed.

**CTCDC MINUTES**  
**November 5, 1997**

**93-10 SIGNING, LIME-YELLOW SPECTRUM**

Bruce Carter recalled that the Federal Register had some information on the results of the fluorescent yellow-green sign experiment and the resulting policies. The comment period closed on October 7, 1996. The evaluation of test results showed that fluorescent yellow-green signs had only marginal effects on improving the behavior of motorists. These signs had little or no noticeable effect on the speed of motor vehicles. The greatest impact was in the public opinion surveys, where people felt the signs would increase pedestrian safety. Consequently, the FHWA proposed to adopt the fluorescent yellow-green as an optional color for pedestrian crossing, bicycle crossing, school advance, school crossing, and school bus stop ahead signs. The mixing of the standard yellow and the fluorescent yellow-green colors should be avoided.

Bruce Carter did not know if the proposal had been approved. Wayne Tanda noted that this item had been completed by the CTCDC with the recommendation to see what happens at the Federal level. Carter suggested tabling the item until there is a final recommendation. Bob Brow told the Committee that the City of Sacramento is going to install such signs. 3M will supply the sheeting, because they believe the use has been approved. Until now, except for experimental purposes, 3M would not supply such sheeting. Sacramento County intends to use fluorescent yellow-green for truck advisory signs. Wayne Tanda suggested that Caltrans find out the status of the approval.

John Fisher told the Committee that there had been no approval up until the last National Committee meeting. Because of the lackluster experimental results, the FHWA was considering using such colors for emergency route signing.

ACTION: Item continued.



**CTCDC MINUTES**  
**November 5, 1997**

**93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST**

Wayne Tanda recalled that in 1993, the cities of Laguna Hills and Yorba Linda requested to test an experimental symbol sign to replace the standard SPEED CHECKED BY RADAR (R48). The request was approved. In 1994 those cities withdrew from the experiment and were replaced by the City of Cypress. In 1995 the City of Tustin asked to be included. These changes were approved. In 1997 the City of Cypress withdrew. Currently the City of Tustin is the sole test location. The experiment was carried out by the firm of Hartzog & Crabill who had developed the final report.

Jerry Crabill said the intent of the experiment was to ask motorists, who had been stopped for speeding in the test area, if they saw the symbol sign. In order to collect such data, Crabill needed the assistance of the police department. The City of Tustin volunteered because they wanted some assistance in controlling speed on Jamboree Road. The basic purpose of the speed control program is to retrain motorists to notice the signs.

Jerry Crabill said the graphs show the higher 50-55 mph speeds were decreased. Not by the signs, but by the enforcement. He interprets the data to indicate that the sign is reminding drivers they need to control their speeds, better than the R48. Police enforcement is still needed. Jerry Crabill told the Committee that the same thing happened in the City of Yorba Linda. Data verifies that speeds were permanently reduced on a four lane highway at a school site. Crabill reiterated that it is the periodic enforcement rather than the sign that reduces speed. But motorists admit to seeing the symbol sign.

Jerry Crabill explained that he is consultant traffic engineer and he primarily works with local agencies. He has not profited from this sign and is doing the work at his own expense. He requested approval of the symbol sign.

John Wallo established that all of the data was collected at Jamboree Road and there was a posted speed limit sign, established through a traffic and engineering survey. Police officers were in the field writing citations on a normal schedule of enforcement. Jamboree Road is a four lane road. Jerry Crabill said there were no warrants for the sign because it is intended as a replacement for the R48.

**CTCDC MINUTES**  
**November 5, 1997**

**93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST** (continued.)

Jerry Crabill recalled that the word “radar” was added to the symbol sign at the request of the Committee and the radar gun was changed to look less like a pistol. Crabill said if the Committee approves the sign, it will be manufactured in a more professional manner. He believes the sign will have the same impact for as long as other symbol signs which have replaced word message signs.

Jerry Crabill said that the “before” study showing initial speeds is in the final report, and the amount of enforcement on Jamboree Road was higher before the sign was installed. Speeds were measured by dual tubes which measure in 5 mph increments. They were able to measure two lanes because the road has a median. Crabill does not believe there is a skew to the data due to changing traffic volumes.

Wayne Tanda asked if a comparative study had been conducted, between the proposed symbol sign and the R48 word message sign, or at least a literature search, to determine if the proposed sign were “equal to or better”. Jerry Crabill responded that there was no direct comparison because he could not commit any more time to the study. Crabill feels that the existing signs are up and not working because motorists are still speeding. He also cited the trend from word message signs to symbol signs

Wayne Tanda questioned the methodology of the study. He sought an explanation for why the maximum range was 50-55 mph, when the speed limit was 50 mph. Tanda was looking for sign effectiveness at 10 to 15 mph instead of 5 mph over the speed limit. He noted that the other increment, 40-45 mph, was actually under the speed limit. Jerry Crabill explained that the increments were selected to show a change in speed. Crabill reasoned that since the data shows a decrease in speed, the sign is effective.

George Vallevieni said that opening Jamboree Road was like putting in a freeway through a residential area. Jamboree Road goes from Irvine Boulevard north to the Tustin city limit and is posted for 50 mph. In the first two years there were three fatalities. There have been no fatalities since the sign went up. Initially there was a great deal of enforcement on this road. In the past year, Vallevieni said he had not been writing as many tickets as he had in the past. He attributes this decrease to the symbol sign, new laser guns, and the fact that motorists were aware of the enforcement.

**CTCDC MINUTES**  
**November 5, 1997**

**93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST** (continued.)

Jerry Crabill suggested that the decision to sign at city limits or specific site should be left to the local agency. Each agency is different and the effectiveness of the location is unique. Richard Backus said he had driven Jamboree Road about six months ago and felt the sign was more useful at that particular location than it would have been at the city limits. George Vallevieni advocated making the sign larger.

Dick Folkers said his city had a similar 6% grade at Route 74 and if a motorist took his foot off the gas he was still going at 55 mph. Gerry Meis thinks symbols signs are more effective than word signs, but he does not like the image portrayed of a police officer pointing a gun. George Vallevieni and Jerry Crabill said that there had been minor publicity in the Tustin area, no adverse public reaction, and no public comment about the radar gun looking like a pistol. They also told the Committee that the original sign in Yorba Linda depicted half a car, with an officers foot on the bumper writing a ticket, and the verbiage, SPEED STRICTLY ENFORCED. Yorba Linda did not object to the stereotype and they achieved a permanent reduction in speed.

Ron Newton expressed concern that the proposed symbol sign implies that only motor cycle officers, in stationary positions, enforce radar. That's not necessarily true. Newton was also concerned about an officer pointing anything at a citizen, especially with respect to other cultures. The existing R48 sign is a simple word sign, which is not ambiguous, and not offensive to anyone. Newton admitted that the proposed symbol sign attracts more attention than the word sign, but he believes the slower speeds were due to increased enforcement. He feels that any sign will not slow traffic without enforcement.

Jerry Crabill disagreed saying the program began with high enforcement which decreased with the passage of time. His conclusion is that the decrease is due to motorist awareness of radar enforcement. Both Crabill and Newton agree that some enforcement is needed to maintain lower speed. Ron Newton suspects that the lower speed on Jamboree Road may have been due to greater initial enforcement and media coverage. He questioned whether the R48 sign should be replaced, given the symbol signs drawbacks.

**CTCDC MINUTES**  
**November 5, 1997**

**93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST** (continued.)

Jerry Crabill maintained that the proposed symbol sign does not show anything that is untrue. An officer can sit on his motorcycle and point a speed measuring gun at a car. This is what the sign depicts. The officer doesn't have to hide. He can park on the curb line and point the laser gun 3000 feet down the road.

George Vallevieni told the Committee that the majority of the fatalities and other accidents happened within the first two years. The 85 percentile is approximately 57 mph and the road is posted at 50 mph. Vallevieni said he had not issued a citation on Jamboree Road in the last six weeks. He has not been on the road nor has he responded to any accidents on the road in that time frame. The road is straight, 4.2 miles long, and has a 20 foot median. There are two new elementary schools, and the 9000 unit subdivision is  $\frac{3}{4}$  completed. Traffic on Jamboree Road is increasing dramatically, yet the accidents are way down.

Bob Brow objected to replacing a regulatory sign with a warning sign. Mark Wilson recalled that the Committee approved a smaller version of the R48 that said RADAR ENFORCED. The purpose of the sign was to fit beneath a speed limit sign. The advantage is to eliminate a second post and installation. Wilson observed that the proposed symbol sign has a RADAR ENFORCED plate, but without a speed limit, doesn't describe what is being enforced.

Bob Brow believes we went to symbol signs on turns because of the influence of international standards. Caltrans doesn't require the use of symbol signs, in fact at freeway ramps message signs are required. Gerry Meis was not sure why the SPEED CHECKED BY RADAR or RADAR ENFORCED signs had to be regulatory. Ron Newton said even if it is black and white, that tickets were not written for the SPEED CHECKED BY RADAR sign .

Jerry Crabill explained that in order to enforce by radar, there must be an engineering and traffic survey, except for prima facie speeds such as school zones, State highways, construction zones, or residential areas. Gerry Meis said that the CHP uses radar enforcement signs as a matter of practice rather than law. Bruce Carter said his county had to pass a resolution, which included such signs, to allow radar control by the CHP.

**CTCDC MINUTES**  
**November 5, 1997**

**93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST** (continued.)

*[The R48 sign specification says , "...may be placed by Caltrans on State highways where the CHP has received authority to use radar and requests such signs...." I could find no required use of the R48 sign. Section 40802 (b) provides that certain prima facie speed limits may not be enforced by radar unless the speed limit has been justified by an engineering and traffic survey within the last five years. There are exemptions for some streets and local roads.]*

John Fisher said that Georgia has signs which say ENFORCED BY DETECTION DEVICES to allow the use of radar, laser, or other device. Wayne Tanda believes the decrease in speed is primarily due to the enforcement of the Tustin police. Tanda commended Jerry Crabill for his effort with the sign. He believes the R48 should be a warning sign. Although the symbol sign had some effectiveness, Tanda saw no assessment of why the proposed symbol sign was better than the existing word sign in the report. He is concerned about a gun shaped device being pointed at anybody when cities are focusing in on community policing. Tanda suggested that some other symbol sign, which would have all the attributes of this sign, without the offensive aspect, could be used.

Bruce Carter said that the public notices something that is different for awhile. After three years it is no different than any other sign. Any improvement effected by this sign occurred because this sign is different. But after awhile, this sign will be the same as an R48. Gerry Meis established that there was no similar MUTCD standard.

John Wallo said that if there is a speed limit sign with a RADAR ENFORCED plate, it would have to be regulatory so that they could be mounted on the same post. Wallo urged the Committee to retain the R48 in addition to any new sign.

MOTION: By Dick Folkers, to recommend adopting the proposed symbol sign as a warning sign and retaining the R48. Motion failed for lack of a second.

**CTCDC MINUTES**  
**November 5, 1997**

**93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST** (continued.)

Ron Newton said that he was opposed to the sign, in any fashion, and wanted to reject the notion of cleaning up the proposed sign. Tanda suggested that new symbol sign designs, with a wide variety of choices, could be brought back to the Committee. The signs would inform motorists of technological enforcement for speed limits.

John Wallo said that he thought the data did not support that speed reduction was caused by the symbol sign. Any motion for a new symbol sign implies there is some benefit to the motorist or to enforcement. Wallo does not believe another symbol sign will achieve anything. Wayne Tanda responded that the existing R48 has no effect unless there is enforcement and that a symbol sign might have a bigger impact.

MOTION: By Wayne Tanda, second by Dick Folkers, to develop an appropriate symbol sign which would advise the motorist of technology enforcement of speed limits. Motion failed 3-5.

John Wallo suggested looking into changing the SPEED CHECKED BY RADAR (R48) a warning sign and maintain the RADAR ENFORCED (R48-1) as regulatory, since it is mounted under speed limit signs. Gerry Meis said he would review such signs but he is concerned about maintaining conformance with MUTCD. John Fisher noted that there are new technologies which have been developed for enforcement and the existing sign needs replacement with a generic symbol sign. Perry Lowden suggested forming a subcommittee. Dick Folkers said he would look into the national committee and how it views the Georgia sign (ENFORCED BY DETECTION DEVICES.) The consensus of the Committee was to continue this topic as a new item under the sponsorship of Dick Folkers. Wayne Tanda expressed the sincere appreciation of the Committee for the effort of the City of Tustin and the firm of Hartzog & Crabill.

ACTION: Item completed.

**CTCDC MINUTES**  
**November 5, 1997**

**97-6 PARKING SIGNS (TM Chapter 8-02)**

Bruce Carter said that this is similar to, but a tougher problem than, Item 91-6 EMERGENCY MEDICAL CARE signs because there is some feeling that the local agencies should be included in parking restrictions on highways. Carter suggested that since he had received little support the item should be withdrawn.

ACTION: Item withdrawn.

**97-10 TRB RESEARCH FOR LOCAL AGENCIES**

Gerry Meis explained that the Director of Caltrans received a letter from the Transportation Research Board in May asking if research was needed to develop a manual for local agencies. The TRB had a panel looking at the effectiveness of navigation and guide signs for highway users. They concluded that while the MUTCD contains much useful information, it focus largely on regulatory and warning signs and is oriented to the needs of the Interstate Highway System. Consequently the MUTCD provides little assistance for local traffic engineers regarding content, design, and placement of navigation and guide signs. The TRB panel concluded that a manual emphasizing issues relating to navigation and guide signing, that is oriented to local and regional streets and highways, would be very useful. Meis said that Caltrans did not want to speak for local agencies and brought the issue to the Committee for comment.

John Fisher agreed there was a need for research dedicated to a surface street environment. Most of the illustrations in the MUTCD and TRAFFIC MANUAL show freeway to freeway interchange signing, but the City of Los Angeles deals with a lot of special situations on surface streets where higher guidance would be helpful. Frank Bard of the City of Santa Monica agreed. Gary Foxen said that one of the most elemental guide signs, promoted by the auto clubs, are street name signs. He would like to see an emphasis on installation or replacement of missing signs. Dick Folkers suggested research into signs to respond to the needs of older drivers. Wayne Tanda commented that navigational signs refer to electronic devices, such as changeable message signs, used on a regular basis to direct motorists to special events.

**CTCDC MINUTES**  
**November 5, 1997**

**97-10 TRB RESEARCH FOR LOCAL AGENCIES** (continued.)

Gerry Meis said that Caltrans would draft a letter to the TRB, indicating support for research into navigation and guide signs, and submit it to the Committee.

ACTION: Item continued.

**97-11 RAISED PAVEMENT MARKERS ON ISLANDS**

Dick Folkers said raised pavement markers are used to guide the motorist. Guard rail and concrete median barrier standards allow for the use of markers on the top of the device. The City of Palm Desert has reduced its standard lane width from 12 to 11 feet. If raised pavement markers are placed next to the median, that reduces the usable lane width further. In addition, blowing dust and a lack of rain makes the raised pavement markers less visible. Folkers would like to have the option of placing raised pavement markers on top of median island curbs. He said that when he was in Sacramento the County used raised pavement markers in this fashion and it seems to work well in inclement weather. The County had subsequently placed them at the lower elevation.

Bruce Carter thought the standard for raised pavement markers on median islands showed no curb. Jack Kletzman said Caltrans felt the standard for the raised median pavement marker should consistently be at the same elevation as the edge stripe. To have a few communities with raised pavement markers up on a curb, might cause problems with motorists expectations. Caltrans experience indicates the action of rain and tires is to clean the pavement markers. There are problems with the markers on guard rail and concrete median barrier being dirty, because they don't have this cleaning action. It is unfortunate that Palm Desert gets so little rain. Perry Lowden said that local agencies were putting them on both road and curb. He suggested the addition of a note, allowing top of curb placement of markers, to protect against litigation.

Bob Brow said the County of Sacramento initially put markers on tops of curbed islands. This required sending crews out to wash the markers because scum stayed on the marker. The County revised the standard to pavement elevation, one foot from the curb, to get the scrubbing action from tires and rain.



**CTCDC MINUTES**  
**November 5, 1997**

**97-11 RAISED PAVEMENT MARKERS ON ISLANDS (continued.)**

Bob Brow shares the concern about the trend toward narrower lanes. He believes motorists try to avoid markers and thereby decrease the effective width by an additional foot. He sees problems with either location, but has no personnel to scrub pavement markers. Brow supports the idea of allowing the local agency the freedom to place the markers at either location.

Perry Lowden pointed out that the Caltrans standard calls for a median island meaning paved median as opposed to curb median. There is no curb median detail. Bruce Carter supported adding a note to Detail 29, to allow a choice of pavement marker placement for curbed medians.

Dave Royer said some agencies put the marker right next to the curb and tires never hit it. Consequently they develop a scum, similar to someone throwing an egg at a reflectorized sign. To avoid dark blotchy markers, the markers need to be placed one to two feet from the curb. Dick Folkers said he had placed some markers up on the curb and they do stay clean.

Ron Newton expressed concern about creating a situation where there is a lack of uniformity. The public understands that they can drive over a raised pavement marker and not lose control of the car. They would now, occasionally have a different situation, where they would hit the curb and lose control of the car. Wayne Tanda agreed and suggested that the County of Sacramento might have data which shows whether this is a problem. An unidentified member of the audience said his city gets sued many times but he can't recall any law suit involving a motorist striking an island, thinking he could run over a raised pavement marker. His city has gone to the standard of placing pavement markers at ground level, but some markers have not been replaced, and remain on the curb. Newton does not believe the absence of a law suit, necessarily means it is in the best interest of the public. Markers on guard rail and concrete median barrier are different because these devices are easily visible. Dick Folkers said there was a fair degree of definition for the curb. The curb is six to ten inches high and is light colored concrete as opposed to the black asphalt.

**CTCDC MINUTES**  
**November 5, 1997**

**97-11 RAISED PAVEMENT MARKERS ON ISLANDS (continued.)**

Wayne Tanda pointed out that because of overlay programs many cities end up with curbs no more than three inches above the roadway. Dick Folkers said that raised pavement markers are limited to problem areas such as a change in alignment. Gary Foxen concurred with the CHP.

John Fisher suggests that where the street lighting is not good, and you depend on the reflectivity of the raised pavement marker, there may be difficulty in distinguishing curb from roadway. Fisher expressed concern about putting down pavement markers without a continuous edge line. He understands the marker is merely a component of the delineation. Dick Folkers said that he had lanes which were so narrow they did not have room for an edge line. An unidentified member of the audience, thought the Traffic Manual did not require an edge line along a continuous island. A line is required only if there is no island or an unimproved center. Another unidentified member of the audience said that standard used non-reflective markers. He advocated striping. Folkers said that if he could not put the markers on top of the curb, he would do nothing. He would not stripe.

MOTION: By Dick Folkers, second by Bruce Carter, to add a note to Traffic Manual Figure 6-7, Median Islands, allowing top of curb placement of raised pavement markers. Motion failed 3-3 with two abstentions.

Wayne Tanda suggested that the Committee needed some data indicating that putting raised pavement markers on the top of median islands is a safe thing to do. There is a second issue of whether raised pavement markers are a supplement to striping or a stand alone device. John Wallo suggested bringing the item back as a request for experimentation. This was the consensus of the Committee.

ACTION: Item continued.

**PUBLIC COMMENTS**

No public comments.

**INFORMATION ITEMS**

**93-18 CROSSWALKS, SEQUENTIAL LIGHTING**

Gerry Meis recalled that the Committee recommended that Caltrans develop a set of specifications for lighting crosswalks. Meis expressed some discomfort with both the substance of the data and the height of the device. The CBAC sent a strong note opposing the height of the device. Sal Rosano said he would see what he could do to get the height of the device reduced.

John Fisher said the City of Los Angeles developed what they call a “Smart Crosswalk” similar to the Santa Rosa proposal. *[See attached report.]* The City likes the idea of a pedestrian activated device. The lights go on when the pedestrian is there. The City was concerned about visibility to motorists from ground level lights. They propose a more standard method of warning motorists of pedestrians in the crosswalk. The City is proposing to establish five “Smart Crosswalk” locations. A “Smart Crosswalk” consists of standard pavement marking, standard advanced warning, with the addition of a flashing beacon. The beacon only flashes when activated by the presents of a pedestrian. The pedestrian is sensed by microwave radar detectors at the crosswalk. This proposal addresses the same concern that Santa Rosa and other communities have, yet it uses standard traffic control devices. The sole deviation is that the beacon only flashes when the pedestrian is present. This has the support of elected officials where there is a problem and a full traffic signal is not warranted. The consensus of the Committee supported this idea.

**94-3 STOP SIGNS AT MID BLOCK**

Gerry Meis said that a letter is about to be sent out which should complete this item. Jack Kletzman said he would send Committee members copies of the letter.

**CTCDC MINUTES**  
**November 5, 1997**

**OFF AGENDA ITEMS**

**PEDESTRIAN SIGNAL INSTALLATION, CITY OF LA PALMA**

Wayne Tanda explained that the City of La Palma intends to install standard traffic control devices and operate them in a non-traditional way. The City sought to determine if this requires any action by the Committee. This is in accord with the revised "Sponsor's Responsibilities" procedure, for determining whether a device is an official traffic control device before having to make a presentation to the Committee.

Mark Esposito said that the City had asked Hartzog & Crabill to look into a pedestrian crossing, which would balance delay to motorists and demand for pedestrians. They are examining three locations. The City of Los Angeles has, for twenty five years, had a standard traffic signal which flashes red when activated by a pedestrian. The pedestrian signal heads are standard. This allows the motorist to proceed through the crosswalk in the absence of a pedestrian conflict. Esposito said the City of Los Angeles has approximately ninety such signals. The City of Long Beach is considering adopting such an operation. The City of Santa Monica has two and is considering expanding to five such signal operations. Esposito views this as a standard traffic control device but requested Committee concurrence that the operation was considered standard.

Mark Esposito noted that the Cities of Santa Monica and Long Beach deviated from the City of Los Angeles in that the flashing red light interval, for motorists, starts at the beginning of the walk clearance symbol. This signal would be all red during the WALK interval. The City of Los Angeles' flashing red light interval starts at the beginning of the WALK interval and continues to the end of the walk clearance symbol. He is recommending that the City of La Palma adopt the all red during WALK sequence. Steve Hancock could not say whether the Los Angeles operation was acceptable under the MUTCD or the Traffic Manual. Mark Esposito could not say whether the signals met the Traffic Manual warrants for signals. An unidentified member of the audience said that there is a section in the national manual that says "... a signal shall operate in either the flashing mode or the stop and go mode. ..." This is subject to interpretation such as in the case of a flashing DON'T WALK. In the signal technical committee this language was deleted in order to allow a flashing operation in conjunction with a static mode. This language has not yet been adopted by the national committee.

**CTCDC MINUTES**  
**November 5, 1997**

**OFF AGENDA ITEMS**

**PEDESTRIAN SIGNAL INSTALLATION, CITY OF LA PALMA** (continued.)

Ismile Norbaksh said the signal for the City of La Palma is warranted. Two of the signals already exist and the only question is consistency of operations and whether the proposed operation needs Committee action. Mark Esposito said that the operation was in conformance with the Vehicle Code and the MUTCD says that the signal can be operated as a flashing red. Esposito said the operation was also consistent with Vehicle Code Section 21455 "Signals in Other Places." He said the precedence has been set in that this operation has working successfully in the City of Los Angeles for twenty five years.

Jack Kletzman said the traffic control device is certainly standard. The real question is whether the operation of the traffic control is a part of the control device, and whether it is standard. Caltrans feels that it is. There is no particular objection to the operation of the device in this fashion, but there may be some language revision necessary by Caltrans to allow this operation. Steve Hancock expressed concern about Traffic Manual definitions being too specific with respect to traffic signal operations.

The consensus of the Committee was that Committee involvement is not needed.

**SIGN SPECIFICATIONS ON THE INTERNET**

John Wallo asked if the sign specifications could be put on the Internet. Jack Kletzman said that Caltrans is headed in that direction but it currently is not feasible. The problem appears to be in the time necessary to download pictures. That is why on the Caltrans web site, CTCDC agendas and minutes do not include pictures. Kletzman said he would look into the matter of having a chat page. Wayne Tanda said ITE has such a chat page and it is used heavily.

**CTCDC MINUTES**  
**November 5, 1997**

**STATUS OF EXPERIMENTS**

**Item 90-7 BICYCLE SIGNAL HEADS**

Wayne Tanda said that the City of Davis anticipates appearing at the next meeting.

**Item 92-4A TRAFFIC SIGNAL DIMMING, CITY OF SAN JOSE**

Wayne Tanda said that the City of San Jose received approval to experiment in 1994. All the devices were installed in 1996. The City is in the process of gathering data and in the midst of a before and after impact analysis on dimming 300 signals. The final report is expected at the next meeting.

**Item 92-4B LED STUDY, CITY OF SAN JOSE**

Wayne Tanda said that the City of San Jose received approval to experiment in 1992. First generation LEDs were installed. In 1995 the City requested to expand the experiment by 300 additional locations and authorization was granted. Tanda asked that with the advent of the Caltrans specification, the experiment be canceled. These first generation LEDs are not putting out sufficient illumination and are being replaced.

**Item 92-4C LED STUDY, OTHER LOCAL AGENCIES**

A letter has been approved by the Committee, advising local jurisdictions that a red LED specification had been adopted by Caltrans and that there is no need for further experimentation. Existing test LEDs should be removed and replaced with standard signal light sources, which now include LEDs, as soon as practical. Item completed.

**Item 93-10 SIGNING, LIME-YELLOW SPECTRUM**

It is unknown whether the FHWA has made a final approval. This item is continued.

**Item 93-14 SPEED CONTROL SIGN, EXPERIMENTATION REQUEST**

The proposed symbol sign failed to win approval. The consensus of the Committee was to continue this topic as a new item under the sponsorship of Dick Folkers. The Committee appreciates the effort of the City of Tustin and the firm of Hartzog & Crabill. Item completed.

**CTCDC MINUTES**  
**November 5, 1997**

**STATUS OF EXPERIMENTS (continued.)**

**Item 94-10 PEDESTRIAN SIGNAL HEAD**

Bruce Carter said this is a count down pedestrian crossing signal head which was approved in 1995. Additional locations were requested in 1996 which were authorized. They have just received new signal heads which meet MUTCD standards. These will be installed in November. The County of Sacramento is working with the Safety and Research Center of the University of North Carolina. Technical problems are delaying the progress of the study, but the County expects to report to the Committee at the second meeting of 1998.

**Item 95-9 LEFT TURN LANE PROTECTED/PERMISSIVE SIGN**

Dick Folkers sent a letter, earlier this year, to the City of Lake Elsinore and received no response. Subsequent phone calls determined that, because of the City's staffing situation, they are not proceeding with the experiment. Folkers recommended that permission to experiment be terminated. Item completed.

**Item 96-3 ILLUMINATED LEFT TURN YIELD SIGN**

Wayne Tanda said authorization to experiment was granted to the City of San Jose in 1996 for an illuminated sign, which would clarify what the motorist should do in a protected/ permissive signal phase. Two signs are currently being installed. The final report is expected in the latter part of 1998.

**Item 97-9 ELECTRIC MESSAGE SIGNS AND ARROW BOARD**

Jack Kletzman said that Caltrans is in the process of testing some electronic message signs which alert motorists to traffic conditions, hazards, and instructions. Caltrans needs to determine how long the signs need to be activated, how many times the sign needs to be activated, and what the pixel size need to be. Authorization for the experiment was granted in 1997. Caltrans is in the process of contracting with Cal Poly for assistance with the experiment.

**ADJOURNMENT**

MOTION: By Dick Folkers, second by Merry Banks for adjournment.

Motion carried 8-0. The meeting was adjourned at 1:35 pm.

## **CALTRANS ACTIONS**

**Item 90-7 BICYCLE SIGNAL HEADS**

Experiment in progress.

**Item 92-4A TRAFFIC SIGNAL DIMMING, CITY OF SAN JOSE**

Experiment in progress.

**Item 92-4C LED STUDY, OTHER LOCAL AGENCIES**

Letter sent to experimenting agencies, notifying them that with the advent of the Caltrans specification no further experimentation is needed.

**Item 92-18 GOLF CART SYMBOL SIGN**

Caltrans will make the sign specifications upon receiving the FHWA approved symbol sign from the City of Palm Desert.

**Item 93-10 SIGNING, LIME-YELLOW SPECTRUM**

Committee is awaiting results from the FHWA.

**Item 93-18 CROSSWALKS, SEQUENTIAL LIGHTING**

Caltrans is reviewing the recommendation of the Committee.

**Item 94-3 STOP SIGNS AT MID BLOCK**

Letter sent to Caltrans districts enumerating a policy for STOP signs at mid-block crossings.

**Item 94-10 PEDESTRIAN SIGNAL HEAD**

Experiment in progress.

**Item 96-3 ILLUMINATED LEFT TURN YIELD SIGN**

Experiment in progress.

**Item 96-7 SPEED LIMIT SIGNING**

Caltrans is reviewing the Committee's recommendation.

**Item 97-9 ELECTRIC MESSAGE SIGNS AND ARROW BOARD**

Caltrans is negotiation with Cal Poly for testing.